

Serial No. 10/081,345
Filed: February 22, 2002

REMARKS

Examiner Interview

Albeit refused by the Examiner, Applicants thank the Examiner for considering an Examiner interview in the instant application. Such an interview was requested to better understand the Examiner's basis for rejection so that, in the spirit of compact prosecution, an appropriate response may be filed. However, even without the assistance of an Examiner interview, Applicants submit this paper to illustrate the pending issues and should be entered as placing the application in condition for allowance, or, at least in clarifying the issues for appeal.

STATUS OF CLAIMS

Claims 1 and 2 are pending in the subject application.

No Claims are amended.

Claims 3-13 stand canceled, without prejudice or disclaimer of subject matter therein, by a previous amendment.

STATUS OF AMENDMENTS

The present remarks are offered to place the application in condition for allowance, or, at least, to better frame the issues for appeal.

Claims 1 and 2 are pending in the subject application.

SUMMARY OF THE INVENTION

The present invention relates to a process for preparing a 2-aminoalcohol comprising treating a 1,2-epoxide with a primary or secondary amine in the presence of

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a magnesium halide catalyst. In one embodiment of the present invention, the magnesium halide catalyst is magnesium bromide diethyl etherate.

ISSUES

Applicants respectfully submit that the following single issue remains.

Are the currently pending process claims 1 and 2 unobvious over U.S. Patent No. 6,204,398 (hereinafter, the "Kent" patent)?

As will be discussed in more detail below, it is Applicants' position that the answer to this issue must be in the affirmative.

GROUPING OF CLAIMS

Claims 1 and 2 are pending in the subject application. Claims 1 and 2 stand or fall together with respect to issue number 1 described above.

ARGUMENT

Issue Number 1 : Claim Rejection – 35 USC § 103(a)

Claims 1 and 2 stand rejected under 35 USC § 103(a) as being unpatentable over Kent et al. (U.S. 6,204,398).

The Examiner notes that Kent discloses a process for the preparation of a 2-aminoalcohol (compound 50, column 21) by treating a 1,2-epoxide (compound 40, column 21) with an amine and a base (column 21, lines 21-23). Further, the Examiner notes that Kent does not suggest the use of magnesium halide catalyst. However, as will be discussed in more detail below, the Examiner fails to meet his burden of

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establishing a *prima facie* case of obviousness, because, as the Examiner admits, Kent fails to teach or fairly suggest any use of a magnesium halide catalyst in the transformation of an epoxide to a 2-aminoalcohol as is claimed in the pending process claims 1 and 2.

Applicants fail to understand the Examiner's basis for his rejection, especially beginning at page 3 of the outstanding office action. The first full paragraph of page 3 of the office action states, "Kent et al. disclose the cyclohexene carboxylate derivatives and their compositions (col. 1, lines 10-11), especially compound 50 (col. 21), compound 7 (col. 23), compound 11 (col. 2), which are closely analogous to the applicant's claimed compounds of claims 3-13; Kent et al's cyclohexene carboxylate compounds and compositions differ from applicant's cyclohexene carboxylate compounds and compositions..." (emphasis added). The Examiner continues in the next paragraph of the office action, "Applicants use of "cyclohexene carboxylate" core structure in the claimed compounds is rendered obvious because Kent ..." (emphasis added).

Applicants respectfully submit that the pending claims 1 and 2 are directed to a novel process for making 2-aminoalcohols. There are no claims pending directed to any compounds or compositions.

Looking further into the Examiner's office action, in the second paragraph of page 3, it is stated, "Use of a known member of a class of materials in a process is not patentable if other members of the class were known to be useful for that purpose, even though results are better than expected." Applicants respectfully ask the Examiner to provide basis for this statement of law which appears to be contrary to current well-established law. The fact that a material is known does not necessarily render a process unpatentable. A process may be novel and patentable if it meets the statutory requirements of patentability.

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The question in the instant application appears to be whether Kent renders obvious, under the statutory regime of 35 USC § 103, the use of a magnesium halide catalyst in the formation of a 2-aminoalcohol from an epoxide. The answer to this question, as the Examiner admits at page 2 of the office action, is that, "Kent et al. does not suggest the use of magnesium halide catalyst in the reaction." (emphasis added)

In his "Response to Arguments" section of the office action (page 4), the Examiner notes that Applicants previously suggested that Kent "fails to suggest or provide motivation for the claimed process which uses a magnesium halide catalyst." In response to this, the Examiner notes that Kent discloses a process for preparation of a 2-aminoalcohol by treating a 1,2-epoxide of formula (40) with an amine. The Examiner also notes that Kent discloses the use of a Lewis acid catalyst $\text{Mg}(\text{ClO}_4)_2$ in converting a lactone attached to two carbon atoms of the cyclohexene ring into an alcohol form (citing col. 18, formula 10 and col. 19, formula 11 of Kent). Applicants fail to understand how this citation is relevant to the instant process claims for the following reasons.

First, the process referred to the by the Examiner involves a structurally different organic transformation. The conversion of a lactone into an alcohol is a different chemical reaction, involving structurally different reagents, as compared to the conversion of an epoxide to a 2-aminoalcohol as instantly claimed.

Second, the process referred to by the Examiner uses, for example, the Lewis acid catalyst $\text{Mg}(\text{ClO}_4)_2$ in converting the lactone (10) into an alcohol (11). Magnesium perchlorate is not a magnesium halide as defined in the originally filed specification at the last paragraph of page 9. Moreover, Applicants respectfully submit that one having ordinary skill in the chemical arts would not recognize Magnesium perchlorate as a "magnesium halide", as the perchlorate radical is not considered a halogen to those skilled in the inorganic chemical arts.

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Finally, the process referred to by the Examiner uses a Lewis acid catalyst, and lists over 50 such Lewis acid catalysts. Applicants respectfully submit that none of the listed catalysts useful in this unrelated (as compared to that instantly claimed) organic transformation is a magnesium halide.

For the above reasons, Applicants maintain (and agree with the Examiner) that Kent neither teaches nor fairly suggests the use of a magnesium halide catalyst in the organic transformation of an epoxide into a 2-aminoalcohol. Applicants have found, as stated, for example, at the fifth paragraph of page 9 of the specification, that the use of a magnesium halide catalyst in the conversion of an epoxide into a 2-aminoalcohol can significantly reduce the reaction time.

CONCLUSION

In view of the foregoing remarks, Applicants submit that the instant application is in condition for allowance. Early notice to that end is earnestly solicited. Alternatively, Applicants request entry of the above remarks as placing the application in better condition for appeal.


Enclosed, please find a request for a two-month extension of time and a notice of appeal.

If a telephone conference would be of assistance in furthering prosecution of the subject application, Applicants request that the undersigned be contacted at the number below.

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No further fee is required in connection the filing of this Amendment. If any additional fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account No. 08-2525.

Respectfully submitted,



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Enclosed : Notice of Appeal
 Petition for a two-month extension of time
 Certificate of Facsimile transmission

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